

STATE OF ALASKA
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL AND GAS
GEOPHYSICAL EXPLORATION PERMIT

Permit # _____
OFFICIAL USE ONLY
(rev 4/6/99)

Applicant/Permittee: Buccaneer Alaska LLC

Address: 952 Echo Ln; Ste 420
Houston, TX 77024

Phone: 713-468-3717
Fax: 713-468-3717

Contractor: Weems Geophysical Inc.

Phone: 713-206-4515
Fax: _____

Contact: John Land

Address: P.O. Box 969
Kenai, AK 99611-0969

Title: Lead Permit Agent
Phone: 817-304-5071
Fax: _____

General Location: Kenai, AK

Period Requested: From: 1/1/2012 To: 1/1/2014

Geophysical Technique: Seismic (complete below) ☐ Other (attached description)

A) Marine: Vessel Name: _____
Registered Owner: _____
Official Number: _____
Radio Call Number: _____

Airguns: Total cubic inches (ci) in array: _____
Maximum Operating Pressure: _____
Minimum Water Depth: _____
Streamer Length: _____

Other Energy Source: _____ (attach description)

B) Uplands: ☒ Vibroseis: _____ Track Mounted ☒ Wheel Mounted
☒ Shallow Hole: Hole Depths 25 ft.

_____ Surface Shot: Charge Heights _____

Explosives: Type: Plastic

Lbs/Shot/Hole: 2.2 Distance Between Charges 369 ft.

Number of Helicopters 2 Fixed Wing Aircraft _____

C) Number of line miles (2D) _____ and/or square miles (3D) to be acquired: 30

D) Line Location Map: The applicant is required to submit a map(s) showing the exact location of all proposed seismic lines. The applicant may request that this map be maintained confidential as provided in AS 38.05.035(a)(8). Do you request confidentiality? Yes ☒ No ☐

Housing for Project Personnel:

A) Housing type: ☒ Existing Facilities Hotels in Kenai
_____ Temporary Camp, please describe _____

- B) Number of Personnel: 60
C) Drinking Water Supply: Kenai City Water
D) Disposal of Solid Wastes: Kenai Peninsula Borough Solid Waste Dept
E) Disposal of Liquid Wastes: Kenai Peninsula Borough

Fuel Storage:

- A) Type of Fuel: Diesel Amount Stored None
C) Method of Storage/Containment: _____
D) Location of Stored Fuel: _____

Surface Travel:

- A) The applicant must provide a list of all surface contact vehicles to be used.
B) Will use of this equipment require clearing of vegetation? Yes if yes, describe method and amount of clearing required. Mulching or hand cutting as per landowner requirement
C) Will river crossings be required? No if yes, list major drainages. _____

Indemnity: Amount: \$100K Bond ID Number B007033
Bonding Company: U.S. Specialty Ins. Co. Type: X Statewide Bond
Address: 13403 NW Freeway _____
Houston, TX 77040 _____
_____ Single Program

The applicant agrees that operations shall be conducted in conformance with applicable Federal, State and local laws and regulations now, or hereafter, in effect during the life the permit. The applicant agrees that operations shall be conducted in strict compliance with the provisions of the Alaska Miscellaneous Land Use Regulations, and permit stipulations.

The applicant certifies that he has read and is familiar with the Alaska Miscellaneous Land Use Regulations.

Signature: 
Print Name John Land
Title Lead Permit Agent

Date 12/19/2011

DO NOT WRITE BELOW THIS LINE

LAND USE PERMIT

The DIVISION OF OIL AND GAS grants to _____
the right to use State of Alaska lands, as described in this application, subject to 11 AAC 96.010 thru 96.250, Miscellaneous Land Use Regulations, and the attached stipulations.

Effective dates for permit: _____ to _____

STATE OF ALASKA

BY: _____ Date _____
TITLE: _____

PLAN OF OPERATIONS KENAI 3D

b. Plan of Operations

i. Project Description: 30 square mile 3D geophysical survey located in and around the City of Kenai. The attached preplot has been designed to avoid all rivers and streams. Due to the fact that we will be utilizing a cable free recording system, there will not be a need for any river/creek crossings. The receiver lines, which run in a north-south direction, are spaced out at an interval of 1155 feet. The receiver points interval is 165 feet. The source lines run in a NW-SE direction and are spaced at 1485 foot intervals. The source point interval is 368.95 feet. Two (2) 40,000 lb. truck mounted vibrators will be used in areas of culture. The vibrator parameters will be finalized upon completion of field tests. Heliportable drills will be used in those areas where an exiting road network is absent. The shotholes will be drilled to a depth of 25 feet and loaded with a 2.2 lb. charge. The holes will be backfilled with the cuttings generated during the drilling of the shothole. Bentonite will be used if permit requirements dictate it.

ii. Permit Requirements: Permit letters have been received by the 2260 private owned landowners (example attached). Meetings have been held with all state, city and borough departments and appropriate permits are in progress at this time. This Plan of Operations will be submitted to these same offices on or about Monday, 12/19/2011. A town hall meeting was held on Tuesday, 12/13/2011, at the Challenger Learning Center in Kenai. The cover letter, which accompanied the permit request, announced this meeting and approximately 200 attended it. The audience was made up of both local landowners as well as several public officials, including Kenai's Mayor and City Manager. The reporters from the Clarion were present also, and published a front-page story, which detailed the meeting. A half page ad was taken out in the Peninsula Clarion newspaper and it ran from Thursday, 12/8/11 thru Tuesday, 12/13/11. The ad was taken out in order to announce the town hall meeting. This was supplemented with twenty (20), thirty (30) second radio spots on the five (5) local radio stations. In addition to these steps, we will be having a second town hall meeting on Tuesday, 1/10/12, at 6:00 at the Challenger Learning Center. This second meeting is being held, in order to give those who were not able to attend the first meeting, the opportunity to watch our power point presentation, as well ask any questions regarding our upcoming project. Furthermore, we will taking out a full page ad in the three (3) local newspapers advertising the 1/10/11 town hall meeting, as well as announcing that the power point presentation viewed at the town hall meeting, will be available for viewing on Buccaneer Energy's website. This will allow the public to view it at their convenience, and gain a better understanding of our operations and the equipment that will be utilized. Written permission will be obtained from all mineral owners. A letter of non-contention will be obtained from all lessees of State owned minerals.

iii. Project Schedule: Permitting operations commenced on 11/7/11 and will continue on through March 2012. Part of the permitting operations will be to serve as liaison between the landowners and governmental agencies and the crew

personnel operating in the field. The permit crew will be present on site until all field operations have been completed and all reparations have been completed. The surveying and PPV phase will commence on or about 1/15/12, with the shot hole drilling (heliportable) phase commencing on or about 2/1/12. The recording phase of these operations will commence on or about 2/21/12. The entire survey should be completed on or about 3/15/12.

iv. Location: This survey is found in T5&6N-R10&11W. The preplot is attached. I have also attached a pdf of the preplot to emailed application for your review.

v. General Operations: Two (2) different energy sources will be utilized during the course of this survey. Vibrators will be used within the populated portions of this survey, and *heliportable drills* will be used away from the populated areas. A new, cable free recording system will be utilized to record this data, which will eliminate the need for river/creek crossings with cables.

vi. Site Closure, Site Restoration, Rehabilitation and Monitoring Plans: It will be the responsibility of the permitting team to oversee the restoration of the surface properties found within this survey. Reparations will be completed to the full satisfaction of the landowner, both private and governmental. Monitoring of PPV (peak particle velocity) before and during recording operations will be conducted, in order to protect all structures such as buildings and water wells. Flow tests of water wells, both public and private, will be conducted before and after recording operations to ensure that no harm comes to these structures, and that the quality of these wells' water remains the same. Monitoring of the crew's field operations, to ensure that all permit terms and conditions are honored by the crew, is the responsibility of the permit agents.

vii. HSE Training: Each individual contractor (i.e. surveyors, drillers, recording crew) will implement a HSE plan. There will be a safety meeting held every morning before leaving for the field, and it will be attended by all contractors. Current weather and road conditions will be announced at each meeting, and safety cards will be filled out and turned in by all field personnel on a daily basis. These cards will be read out loud at the morning safety meeting.

viii. Local hire and Community Issues/Relations: As mentioned earlier, great steps have already been taken to build a strong relationship between our operations and the public. We will continue to take whatever steps are necessary to continue the building of a strong relationship with the public and governmental offices such as the City of Kenai and the Kenai Peninsula Borough. We have discussed the hiring of locals with some of the Native Associations already, and will continue to pursue this with the contractors involved in this survey.

ix. Responsible Parties Contact Information:

John Land, Lead Permit Agent: Cell (817) 304-5071 Office (907)598-5071

x. Equipment List:

Permit Agents:

Pick up trucks

Surveying:

Pick up trucks

GPS Surveying instruments

Snowmobiles

Helicopter if needed

PPV:

PPV instruments

Pick up trucks

Snowmobiles

Shot Hole Drilling (Heliportable):

Drills manufactured by Clean Harbors

National Compressed Air air compressors

Hughes 204UH1B Helicopters

Recording Crew:

Sercel 428-XL Instrumentation

Autoseis HDR Nodal recording boxes (cable free)

SG-10 geophones with snow plates, 6 per group

International 4700 crew cab diesel truck with 400-gallon diesel tank for refueling

F350 4x4 pick up trucks

Helicopter for swinging geophones and HDR's where roads aren't present

Truck mounted 40,000 lb. vibrators (2) with one (1) held in reserve

xi. Contingency Plans:

All necessary steps will be taken to prevent discharge of all fluids. Diapers will be kept on all vehicles and implemented so as to prevent any leaks or spills from being absorbed into the native soil. Soiled diapers will be removed from the job site and discarded as per State regulations.

xii. General vicinity or civil map:

The attached plat, which was generated with the assistance of the Borough's GIS department, details all public roads and bodies of water. The number found inside each individual parcel, is the permit number, which was assigned, by the permit team.

xiii. Topo map:

A topo map with the pre plot on it is in progress at this time and will be provided once it is completed.

xiv. We are currently looking for a facility, which will be used by the surveyors, drillers and recording crew. The facility will also be used by the crews for daily safety meetings. Our preference is to have this building right here in Kenai. Not only do logistics dictate this, but we prefer to spend our money locally in order to benefit the Kenai economy.

xv. Environmental baseline data:

Protecting the Kenai environment has the highest priority for everyone involved in this survey. We consider ourselves as guests here in Kenai. Every possible step will be taken to minimize our footprint while working in this beautiful city. Again, it is the responsibility of the permit agents to ensure that when this survey has been completed, that all reparations are made to the complete satisfaction of the private landowners and governmental agencies. This survey is only the first of others to follow. We want to leave a positive feeling in this community once this first survey is completed, so that we will be welcome back on future projects.

xvi. Oil and gas lease ownership:

1. Surface ownership plat including utility ROWs and existing roads and landowner property lines is attached. A PDF of same is attached to emailed application.
2. Permit letter/Notice to adjacent landowners regarding surface access has been mailed out to all 2269 surface owners. Over 200 of them have been signed and returned to our Kenai Office.
3. Same as paragraph 2.
4. Letters of non-objection from all subsurface Leaseholders have not been solicited at this time, due to the fact that the mineral title work is still in progress. However, all lessees of State owned minerals have been identified.

c. Mitigation Measure Analysis:

All measures to mitigate potential damage to fish habitat, as per the Kenai River Center's terms and conditions, will be adhered to. This includes a 150 foot buffer zone from all anadromous streams, where no brush clearing or shot hole drilling activities will be allowed. Due to the fact that we are utilizing a cable free recording system, there will not be a need for stream/river crossings. We will maintain a clean work area, particularly with regard to food and food associated waste. Due to the fact that we will not have a field camp, the potential for attracting animals to the job site is reduced. The intentional disturbance of nesting or denning areas is strictly prohibited as well as the intentional disturbance of any wildlife. Any observed bear dens will be reported to the Lead Permit Agent, who will coordinate with the local authorities and ADF&G. All crew personnel will be required to report any dead or injured animals to the Lead Permit Agent as well. He will then notify the appropriate authorities of said report. The decision to mulch or hand cut native trees for line clearing purposes, will be made based on specific permit requirements as they apply to private lands as well as those owned by State Agencies.

**GEOPHYSICAL/GEOTECHNICAL OPERATIONS
SURFACE ENTRY AND DAMAGES COMPENSATION AGREEMENT
EXHIBIT A**

DATE: 12/4/2011
AGREEMENT #: 26

LANDS:

PARCEL #: 04106309
LEGAL: T 6NR 11W SEC 36 SEWARD MERIDIAN KN 0810101 BEAVER CREEK ALASKA SUB
AMENDED LOT 9 BLK F

PARCEL #: 04106312
LEGAL: T 6NR 11W SEC 36 SEWARD MERIDIAN KN 0810101 BEAVER CREEK ALASKA SUB
AMENDED LOT 12 BLK F

PARCEL #: 05503261
LEGAL: T 5NR 11W SEC 13 & 14 SEWARD MERIDIAN KN GL 1 & SW1/4 NW1/4 IN SEC 13 & GL 2 & 7
IN SEC 14

PARCEL #: 04106109
LEGAL: T 6NR 11W SEC 36 SEWARD MERIDIAN KN 0810101 BEAVER CREEK ALASKA SUB
AMENDED LOT 9 BLK C ADL 201207

PARCEL #: 04103040
LEGAL: T 6NR 11W SEC 35 SEWARD MERIDIAN KN 0860072 ALASKA STATE LAND SURVEY 84-157
TRACT A

PARCEL #: 04106210
LEGAL: T 6NR 11W SEC 36 SEWARD MERIDIAN KN 0810101 BEAVER CREEK ALASKA SUB
AMENDED LOT 10 BLOCK B

PARCEL #: 04107206
LEGAL: T 6NR 11W SEC 36 SEWARD MERIDIAN KN 0810101 BEAVER CREEK ALASKA SUB
AMENDED LOT 6 BLOCK I

PARCEL #: 04106111
LEGAL: T 6NR 11W SEC 36 SEWARD MERIDIAN KN 0810101 BEAVER CREEK ALASKA SUB
AMENDED LOT 11 BLK C

PARCEL #: 04106203
LEGAL: T 6NR 11W SEC 36 SEWARD MERIDIAN KN 0810101 BEAVER CREEK ALASKA SUB
AMENDED LOT 3 BLK B

PARCEL #: 04937008
LEGAL: T 5NR 10W SEC 7 SEWARD MERIDIAN KN GOVT LOT 11

PARCEL #: 04106114
LEGAL: T 6NR 11W SEC 36 SEWARD MERIDIAN KN 0810101 BEAVER CREEK ALASKA SUB
AMENDED LOT 14 BLOCK C

PARCEL #: 04323028

LEGAL: T 6NR 11W SEC 36 SEWARD MERIDIAN KN 0810101 BEAVER CREEK ALASKA SUB
AMENDED LOT 13 BLK F

PARCEL #:04106305

LEGAL: T 6NR 11W SEC 36 SEWARD MERIDIAN KN 0810101 BEAVER CREEK ALASKA SUB
AMENDED LOT 5 BLK F

PARCEL #:04106311

LEGAL: T 6NR 11W SEC 36 SEWARD MERIDIAN KN 0810101 BEAVER CREEK ALASKA SUB
AMENDED LOT 11 BLK F

PARCEL #:04106206

LEGAL: T 6NR 11W SEC 36 SEWARD MERIDIAN KN 0810101 BEAVER CREEK ALASKA SUB
AMENDED LOT 6 BLOCK B

PARCEL #:04107211

LEGAL: T 6NR 11W SEC 36 SEWARD MERIDIAN KN 0810101 BEAVER CREEK ALASKA SUB
AMENDED LOT 11 BLK I

PARCEL #:04106205

LEGAL: T 6NR 11W SEC 36 SEWARD MERIDIAN KN 0810101 BEAVER CREEK ALASKA SUB
AMENDED LOT 5 BLOCK B

PARCEL #:04106316

LEGAL: T 6NR 11W SEC 36 SEWARD MERIDIAN KN 0810101 BEAVER CREEK ALASKA SUB
AMENDED LOT 16 BLK F

PARCEL #:04107204

LEGAL: T 6NR 11W SEC 36 SEWARD MERIDIAN KN 0810101 BEAVER CREEK ALASKA SUB
AMENDED LOT 4 BLK I

PARCEL #:04106207

LEGAL: T 6NR 11W SEC 36 SEWARD MERIDIAN KN 0810101 BEAVER CREEK ALASKA SUB
AMENDED LOT 7 BLOCK B

PARCEL #:05501017

LEGAL: T 5NR 11W SEC 12 SEWARD MERIDIAN KN GOVT LOTS 1 2 7 8 9 10 & 13 & SE1/4 NE1/4 &
N1/2 SE1/4 & N1/2 SW1/4 SE1/4 & NE1/4 SW1/4

PARCEL #:05501006

LEGAL: T 5NR 10W SEC 6 & 7 SEWARD MERIDIAN KN GL 8 IN SEC 6 & GL 5 6 & 7 IN SEC 7

PARCEL #:04106307

LEGAL: T 6NR 11W SEC 36 SEWARD MERIDIAN KN 0810101 BEAVER CREEK ALASKA SUB
AMENDED LOT 7 BLOCK F

PARCEL #:04103033

LEGAL: T 6NR 11W SEC 36 SEWARD MERIDIAN KN THAT PORTION SE1/4 LYING NORTH OF KENAI
SPUR HWY & EASTERLY OF BEAVER CREEK ALASKA SUB EXCLUDING ASLS 76-118

PARCEL #:04106214

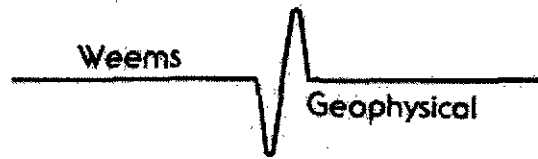
LEGAL: T 6NR 11W SEC 36 SEWARD MERIDIAN KN 0810101 BEAVER CREEK ALASKA SUB
AMENDED LOT 14 BLOCK B

PARCEL #:04103048

LEGAL: T 6NR 11W SEC 36 SEWARD MERIDIAN KN THAT PORTION OF THE SW1/4 LYING SOUTH &
WEST OF BEAVER CREEK ALASKA SUB & THE KENAI SPUR HWY EXCLUDING ALASKA STATE
LAND SURVEY 2004-25

PARCEL #:04106211

LEGAL: T 6N R 11W SEC 36 SEWARD MERIDIAN KN 0810101 BEAVER CREEK ALASKA SUB
AMENDED LOT 11 BLOCK B



**GEOPHYSICAL/GEOTECHNICAL OPERATIONS
SURFACE ENTRY AND DAMAGES COMPENSATION AGREEMENT**

DATE: December 4, 2011

AGREEMENT #: 26

GRANTOR: Alaska State D N R
550 W 7th Ave Ste 650
Anchorage, Ak 99501

OPERATOR: Weems Geophysical, Inc.
LOCAL OFFICE: PO Box 969
Kenai, AK 99611-0969

LANDS: See Exhibit A attached hereto and made a part of this document

ESTATE OWNED: ☐ Surface ☐ Surface Leasehold
☐ Mineral ☐ Mineral Leasehold

Grantor hereby grants and permits to Operator, its contractors, representatives, successors and assigns, the right to enter upon the lands described in the attached Exhibit A (the "Lands") and conduct geophysical and geotechnical exploration thereon, including, without limitation, the conduct of seismic surveys and soil sampling and testing, subject to the payment to Grantor as follows:

1. A payment for actual, documented loss of crops or agricultural use and other Ordinary Damages (as defined herein) for which such payment will depend on actual loss, if any, at the time of seismic acquisition. Calculation and documentation of crop or agricultural use loss, if any, shall be as set forth in Exhibit B attached hereto and made a part of this document.

The amounts paid to Grantor as provided above cover all Ordinary Damages, if any, that may result to Grantor's property as a result of Operator's operations, and Grantor, on behalf of himself, his heirs, successors and assigns, hereby forever releases Operator and its employees, agents, assigns and/or contractors from any and all claims for Ordinary Damages arising out of or in any manner related to the operations conducted by Operator in exchange for such payment. Ordinary Damages are all damages reasonably caused by or otherwise demonstrably resulting from the conduct of such operations on the Lands in compliance with this permit and applicable law, including without limitation, all damage to crops, grasses, trees, shrubs and other vegetation; any fixed structures or improvements upon, under or attached to the Lands; and personal property on the Lands; provided however, Operator may, in its discretion, choose to repair in lieu of any payment all damages caused by Operator to roads, ditches, culverts, bridges, fences, gates and other physical improvements on the Lands, fill all excavations and shot holes, and remove its equipment and personnel upon termination of this permit. In the event that

Operator does not enter upon the Lands in exercise of the rights granted herein, Operator shall not be obligated to make the above-prescribed payments to Grantor.

Amounts paid shall be proportionately reduced in the event that Grantor owns less than the entire surface estate in the affected lands. The right of entry granted above shall include without additional cost to Operator the right of Operator to bring workmen and all related equipment upon the Lands, together with full rights of ingress and egress across the Lands for the purpose of conducting seismic and geotechnical operations and surveys in and on the Lands and other lands located in the vicinity thereof.

Grantor agrees that if the surface, mineral or leasehold rights for the above-described property are owned by others, Grantor will advise Operator of such status, if known. Grantor does hereby declare that: (1) Grantor has the legal authority to sign and enter this Agreement and receive payment of damage settlements with respect to the above-described property; (2) Grantor has read this Agreement and had the opportunity to consult with an attorney of his own choosing on the meaning and legal effect of this Agreement before signing; and (3) Grantor is not relying on any promise, assurance or statement of any kind by Operator not expressed in this Agreement in making this Agreement.

All operations hereunder will be conducted at Operator's sole risk and expense. Operations will be conducted in such a manner as to leave the surface in as near its original condition as reasonably possible. Operator will indemnify Grantor and hold Grantor harmless from all liability to or claims from others which may result from Operator's operations on the Lands hereunder. In addition, Operator agrees that in the exercise of Operator's rights hereunder, Operator shall comply with the provisions of Exhibit A if any.

IN WITNESS WHEREOF, this instrument is executed and effective as of the date first above written and will remain in effect for a period of (2) years.

GRANTOR(S):

OPERATOR:

_____, as contract agent
for Weems Geophysical

Phone# (_____) _____ - _____ Cell # (_____) _____ - _____

Fax# (_____) _____ - _____

Email Address _____

SSN# or Tax ID# _____